

ABSTRACT

5 In a motor vehicle driveline having an
automatic transmission driveably connected to a transfer
case whose output is continually connected to a first
output, a clutch, selectively engaged in response to a
control signal, driveably connects a second output to the
10 first output. A digital computer continually monitors
the occurrence of a change of clutch slip, input torque
and a torque rate change to control the torque
transmitted by the clutch to the second output. The
control causes the clutch to transmit torque to the
15 second output having a constant fraction of the input
clutch torque and another portion that is proportional to
the clutch slip. This result simulates the torque slip
characteristics produced by transfer case having both a
center differential mechanism and a viscous clutch.

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